NOAA
S 221

GENERAL NOTES

BOOKLET INDEX

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10	PLAN OF "F" NAVIGATION BRIDGE
11	PLAN OF "G" TOP OF HOUSE

REVISIONS

REV	SHT	ZONE	ITEM	DESCRIPTION	DATE	APPD
A				THIS REVISION ACCOMPLISHED TO INCORPORATE THE INSTALLATION OF A NEW TRANSVERSE BULKHEAD AT FRAME 23 BELOW THE INNERBOTTOM PLATING AND NEW SOUND ROOM NO. 3	05/04/99 R. HERMES,	
	ALL			ADDED NOAA CAGE CODE AND MODIFIED CAD FILENAME		
	1			ADDED REVISION BLOCK		
	2			MODIFIED THE FUEL CAPACITY		
	4,5			ADDED NEW TRANSV BHD AND NOTATION FOR NEW NO. 3 SOUND RM		
	5,6			ADDED MANHOLES PROVIDING ACCESS TO NEW NO. 3 SOUND ROOM		
B	ALL		1.	CONVERTED FROM PREVIOUS FORMAT OF REFERENCE 1 AND REVISED TO REFLECT REFERENCES 2 THRU 10 AND POST MRP CONDITIONS AT VIGOR MARINE SHIPYARD PORTLAND, OREGON IN FY 2009.	08/29/11	AAA
C	4,5	VAR	1.	CONVERTED DO TANK A-08-001 TO AFT GRAYWATER TANK.	02/22/19	AAA
	4-6	VAR	2.	CONVERTED DO TANK B-08-001 AND SEWAGE HOLDING TANK B-08-002 TO BE BLACKWATER TANK.		
	2	13-C	3.	UPDATED TANK CAPACITY TABLES.		
	4,6	VAR	4.	RENAMED FOREPEAK TANK TO VOID		
	5	36-B	5.	RESIZED AND RENAMED GALLEY DRAIN TANK A-04-103 TO GRAYWATER TANK A-04-001		
D	4	26-B	1.	CORRECTED INBOARD VIEW OF DO A-02-002 AND NO. 3 SOUND ROOM	10/18/19	NOAA
	2	VAR	2.	UPDATED HOMEPORT AND TANK CAPACITIES		

REFERENCES

NO	TITLE	DRAWING NO
1	GENERAL PLANS	S0900-2-2A
2	JOINER ARRANGEMENT C DECK, REV A	4233-601-01
3	JOINER ARRANGEMENT D DECK, REV A	4233-601-02
4	JOINER ARRANGEMENT E DECK, REV A	4233-601-03
5	JOINER ARRANGEMENT F DECK, REV A	4233-601-04
6	SURVEY BOAT DAVIT DAVIT FDNS & STRL MODS	RA-583-001
7	SURVEY BOAT CATWALKS	RA-583-002A
8	RESCUE BOAT FOUNDATIONS AND STRUCTURAL MODS	RA-583-003
9	FWD DECK CRANE INSTALLATION	RA-573-001
10	MOVING VESSEL PROFILER FOUNDATION/INSTALLATION	RA-185-001

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
OFFICE OF MARINE AND AVIATION OPERATIONS

ART ANDERSON ASSOCIATES
202 PACIFIC AVE, BREMERTON, WA 98337-1932
(360) 479-5600 FAX(360) 479-5605

CONTRACT NO. AB133M-05-CQ-1044
TAR NO. AAA-FMP-002(93)
DSGN 6/14/93 C. STAEHLI
DWN 6/14/93 C. FORESTER
CHK 6/14/93 C. STAEHLI
CHK 6/14/93 J. CARLSON

NOAA APPROVAL

NOAA SHIP *RAINIER*

GENERAL PLANS

MA DESIGN S2-MA-72A

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	D
SCALE: NONE		CAD FILENAME S0900-2-2_B.dwg	SHT 1 OF 11

GENERAL INFORMATION

LAUNCHED	MARCH 1967
DELIVERED	APRIL 1968
COMMISSIONED	OCTOBER 1968
CALL LETTERS	WTEF
DESIGNER	MARITIME ADMINISTRATION
BUILDER	AEROJET–GENERAL SHIPYARDS JACKSONVILLE,FL.
SISTER SHIPS	FAIRWEATHER, MT. MITCHELL
HOME PORT	NEWPORT, OR
HULL	WELDED STEEL\ICE STRENGTHENED
ENDURANCE	30 DAYS
ENDURANCE CONSTRAINT	STABILITY
RANGE	8,012 NM

△D2

GENERAL CHARACTERISTICS

LENGTH OVERALL	231'–9 3/8"
LENGTH BETWEEN PERPENDICULARS	198'–9"
LENGTH DESIGN LOAD LINE	197'–0"
BREADTH (MOLDED)	42'–0"
DEPTH (MOLDED)	20'–0"
DEADWEIGHT	735.68 TONS
LOADLINE DISPLACEMENT	2,192.8 TONS
GROSS TONNAGE	1,492 TONS
NET TONNAGE	447 TONS
SPEED (CRUISE)	11 KNOTS
SPEED (MAX)	14.5 KNOTS

COMPLEMENT

COMMISSIONED OFFICERS	12
LICENSED OFFICERS	4
CREW	35
SCIENTISTS	4

HABITABILITY

SINGLE STATEROOMS	14
DOUBLE STATEROOMS	13
FOUR BUNK ROOMS	6
TOTAL BUNKS	64

FOOD–SERVICE SEATING

CAPTAIN'S CABIN	4
WARDROOM	12
SHIP'S OFFICER'S MESS	10
CREW'S MESS	28

SCIENTIFIC LABORATORY FACILITIES

DRY OCEANOGRAPHIC LAB	240 Sq Ft

MISC. EQUIPMENT

STOCKLESS ANCHOR\3,000 LBS (EA)	3
1 3/8" STUD LINK CHAIN (165 FATHOMS)	2
GRAVITY DAVITS (SETS)	5
FAST RESCUE BOAT VEST DAVIT	1
LIFE RAFTS (CAPACITY EACH SIDE)	100%

FRESHWATER SYSTEM

EVAPORATORS (CUNO ENGINEERING)	2
MAXIMUM PRODUCTION	7,000 GPD
NORMAL CONSUMPTION	3,500 GPD
STORAGE CAPACITY (100%)	16,684 GALLONS

△D2

FUEL SYSTEM

FUEL TYPE	#2 DIESEL
FUEL CONSUMPTION	120 GPH
FUEL CAPACITY (95%)	96,997 GALLONS

△D2

SEWAGE WASTE CONTROL

SYSTEM TYPE	ELECTROCATALYTIC
MANUFACTURER	OMNIPURE
HOLDING CAPACITY (100%):	
GRAYWATER HOLDING TANK A–08–001	5,610 GALLONS
GRAYWATER HOLDING TANK A–04–001	1,847 GALLONS
FWD LIFT STATION TANK	241 GALLONS
AFT LIFT STATION TANK	588 GALLONS
BLACKWATER HOLDING TANK B–08–001	5,029 GALLONS

△D2

OILY WASTE CONTROL

SYSTEM TYPE	OILY WATER SEPARATOR
MANUFACTURER	WORLD WATER SYSTEMS, HELI–SEP

△C3

ELECTRONICS

COMMUNICATIONS

VHF/FM MARINE BAND TRANSCEIVERS
MF/HF MARINE BAND TRANSCEIVERS
HF ALARM WATCH RADIO RECEIVER (2182 kHz)
NAVTEX RECEIVER
CELLULAR LETEPHONE
PORTABLE UHF/FM TRANSCEIVERS
INMARSAT STANDARD B RADIO TRANSCEIVER
INMARSAT STANDARD C RADIO TRANSCEIVER
EMERGENCY POSITION INDICATOR RADIO BEACONS (EPIRB'S)
SEARCH AND RESCUE TRANSDUCER (X–BAND RADAR FREQ)

ACOUSTICS

DEEPWATER ECHO SOUNDER
SHALLOW–WATER ECHO SOUNDER
HYDROGRAPHIC SURVEY SOUNDERS
SIDE SCAN SONAR

NAVIGATION

X AND S BAND RADAR w/ ARPA DISPLAY
DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) RECEIVERS
ELECTRICAL CHART NAVIGATION SYSTEM (ECS)
GYROCOMPASS

SCIENTIFIC EQUIPMENT

SEA–BIRD ELECTRONICS:
SBE 19, SEB 19 PLUS, SEACAT CTD PROFILERS
SHIPBOARD ENVIRONMENTAL DATA ACQUISITION SYSTEM (SEAS)
AIR AND SEAWATER TEMPERATURE SENSORS
ODIM MVP30 MOVING VESSEL PROFILER SOUND VELOCIMETER
POWER ISOLATION PROTECTION FOR SCIENTIFIC EQUIPMENT

ABS CLASSIFICATION A1 Ⓔ ICE STRENGTHENED

DECK MACHINERY

TYPE	MANUFACTURER	CAPACITY	QTY
FIXED LENGTH CRANE	SKAGIT	5,000 POUNDS	1
TELESCOPING BOOM CRANE	NORTH PACIFIC CRANE	2,000 POUNDS @ 33FT	2

ENGINEERING

TYPE	MANUFACTURER	RATING	QTY
MAIN PROPULSION (GEARED DIESEL)	GENERAL MOTORS	1,200 HP (EA)	2
AUXILIARY PROPULSION (BOW THRUSTER)	DETROIT DIESEL\BIRD JOHNSON	200 HP	1
PROPELLERS (3 BLADE\CONTROLLABLE PITCH)	BIRD JOHNSON	8'–6" DIAMETER	2
SHIP'S SERVICE GENERATORS (460 VAC)	MTU\STAMFORD	415 KW	2
EMERGENCY GENERATOR (450 VAC)	DETROIT DIESEL\GE	75 KW	1
STEERING GEAR (ELECTRO–HYDRAULIC)	LIGERWOOD	– –	1

NOTE: ELECTRICAL SERVICE: 450 VAC 3 PHASE
120 VAC 3 PHASE
120 VAC 1 PHASE
120 VAC 1 PHASE UNINTERRUPTED POWER FOR SCIENTIFIC EQUIPMENT

LAUNCHES & SMALL BOATS

TYPE	PROPULSION	LENGTH	QTY
ALUMINUM SURVEY LAUNCH (ALL–AMERICAN MARINE)	DIESEL	29 FEET	4
ALUMINUM SURVEY LAUNCH (JENSEN/MUNSON)	DIESEL/JET DRIVE	29 FEET	1
ALUMINUM OPEN BOAT (SEA ARK)	GASOLINE OUTBOARD	19 FEET	1
ALUMINUM SAFE BOAT (AMERICAN EAGLE)	GASOLINE OUTBOARD	19 FEET	1

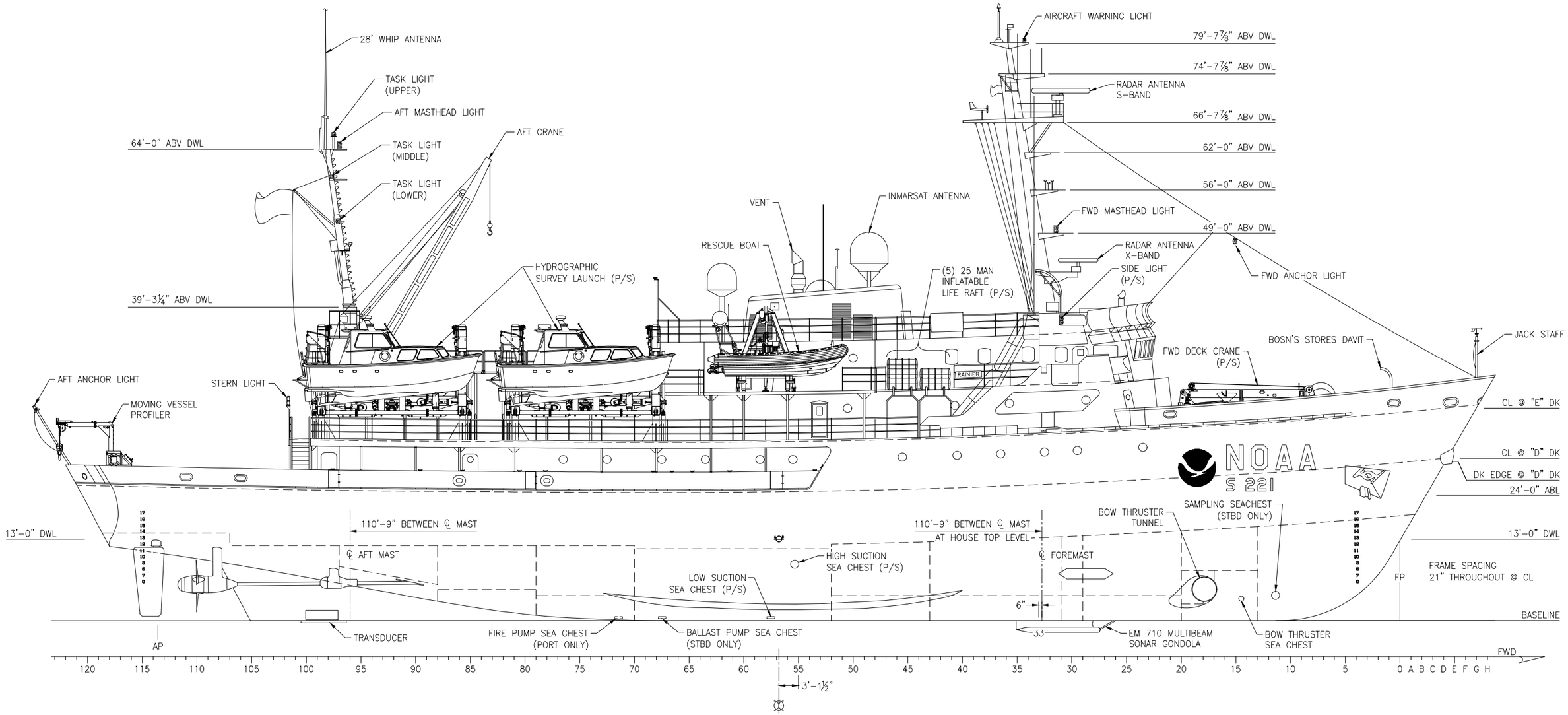
LEGEND

STEEL BHD

JOINER DIVISIONAL BHD

△B1

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900–2–2	D
SCALE: AS SHOWN		CAD FILENAME S0900–2–2_B.dwg	SHT 2 OF 11

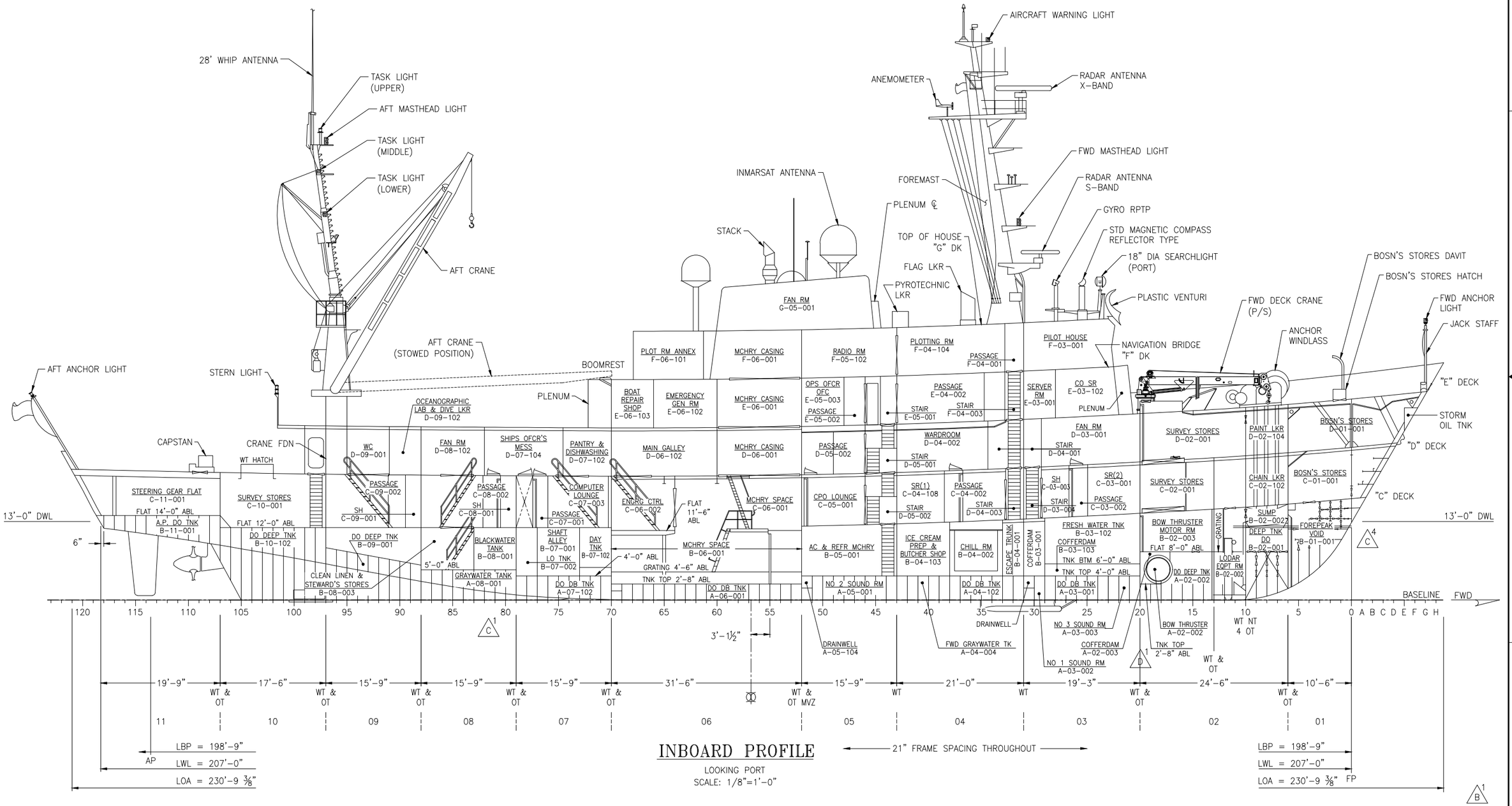


OUTBOARD PROFILE

STARBOARD PROFILE
SCALE: 1/8"=1'-0"

0 2' 4' 6' 8' 12' 16' 24'
SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	B
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 3 OF 11



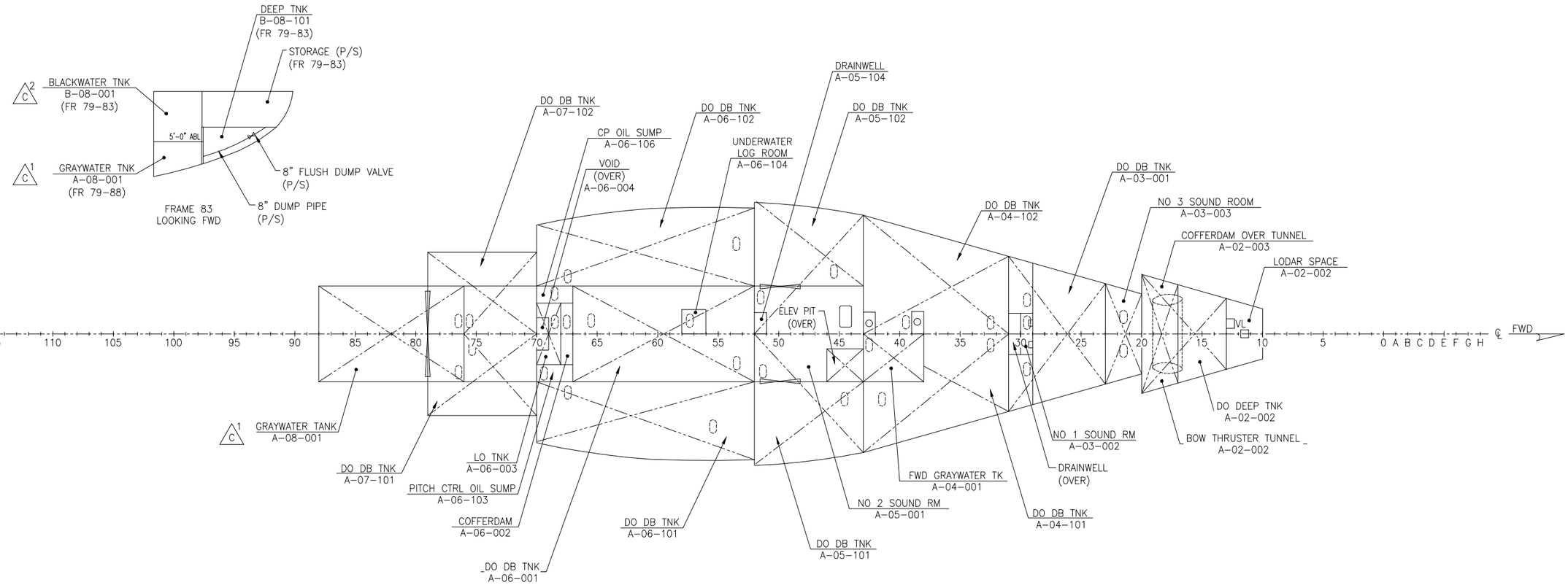
INBOARD PROFILE

LOOKING PORT
SCALE: 1/8"=1'-0"

21" FRAME SPACING THROUGHOUT

0 2' 4' 6' 8' 12' 16' 24'
SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	D
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 4 OF 11



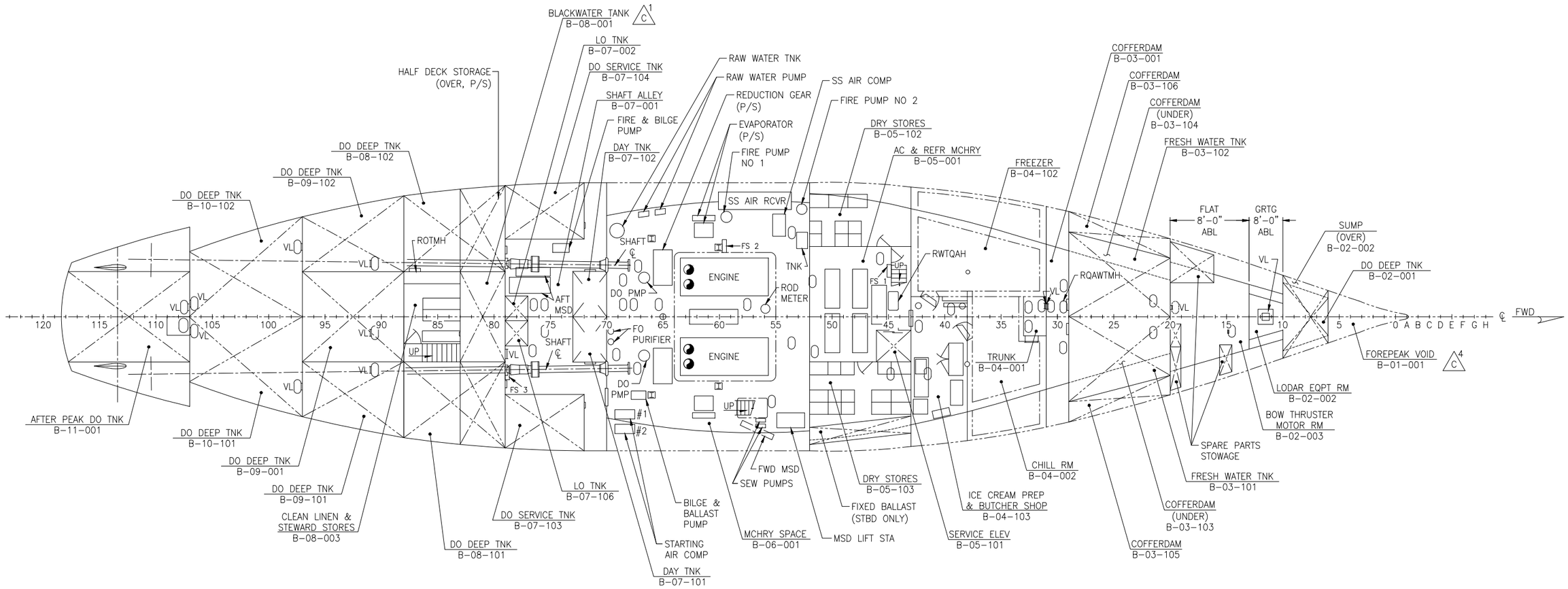
"A" DECK

SCALE: 1/8"=1'-0"

0 2' 4' 6' 8' 12' 16' 24'

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	C
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 5 OF 11

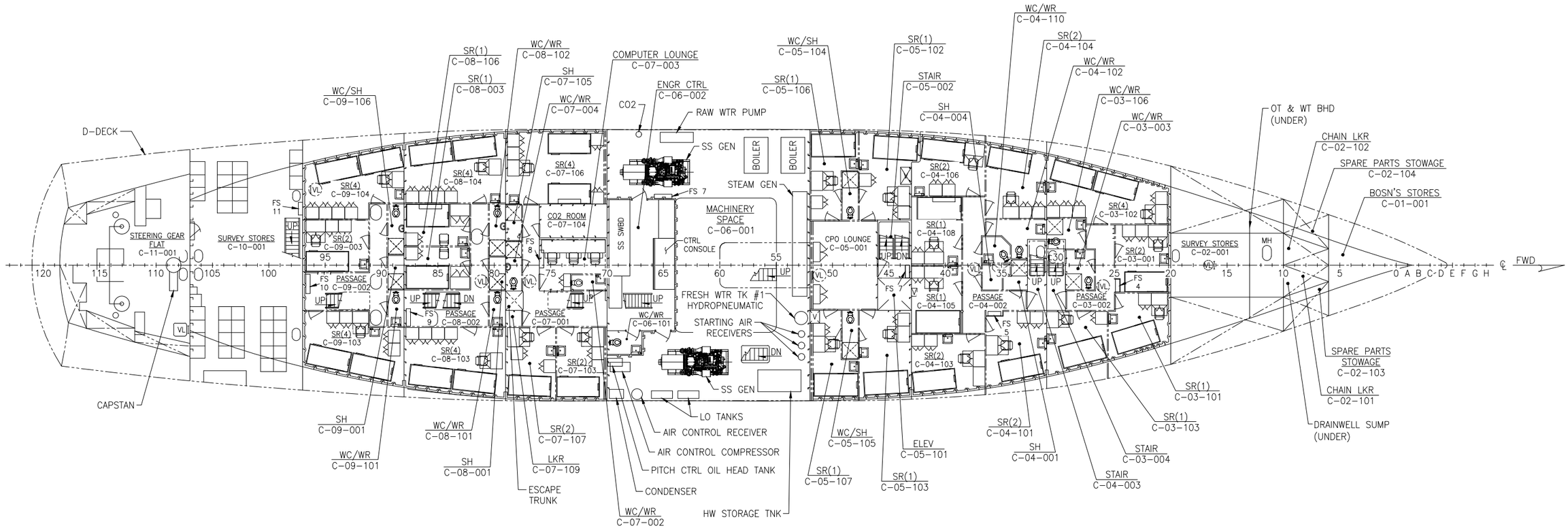


"B" DECK

SCALE: 1/8"=1'-0"

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	C
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 6 OF 11



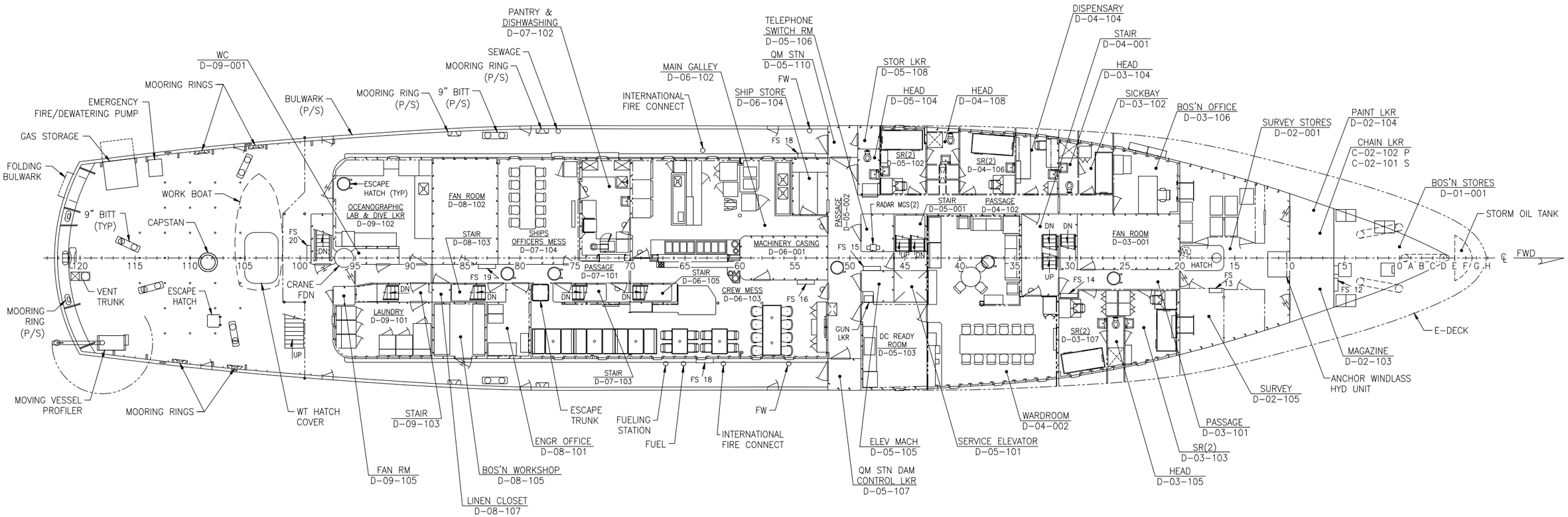
"C" DECK

SCALE: 1/8"=1'-0"

0 2' 4' 6' 8' 12' 16' 24'

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	B
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 7 OF 11

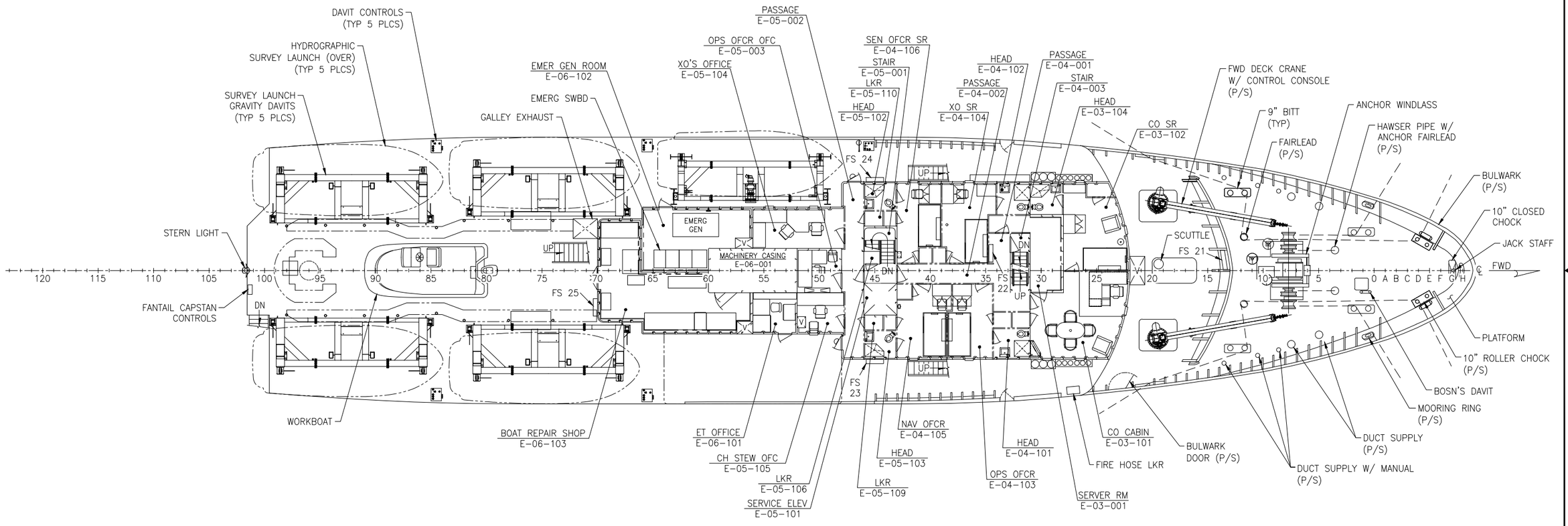


"D" DECK

SCALE: 1/8"=1'-0"

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	B
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 8 OF 11

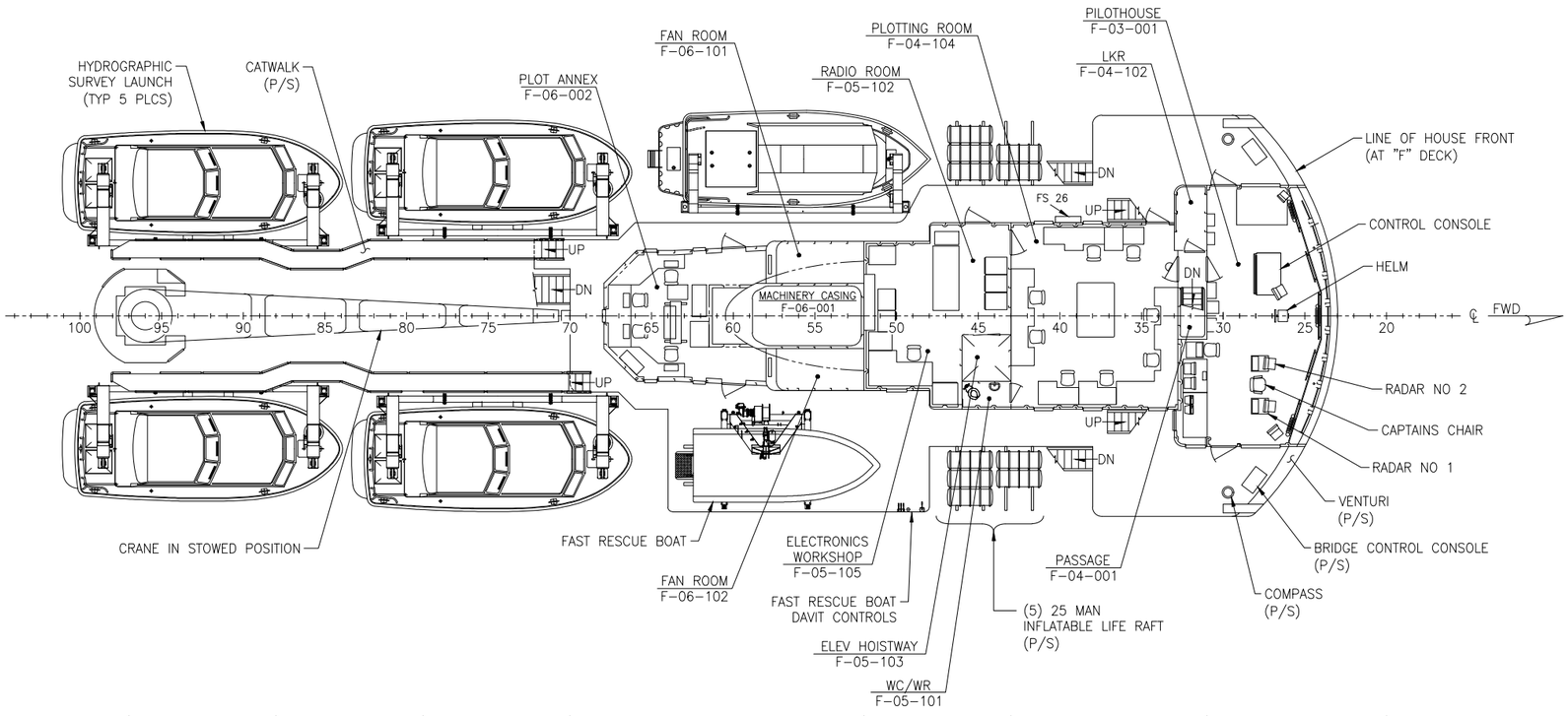


"E" DECK

SCALE: 1/8"=1'-0"

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	B
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 9 OF 11



"F" DECK

SCALE: 1/8"=1'-0"

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
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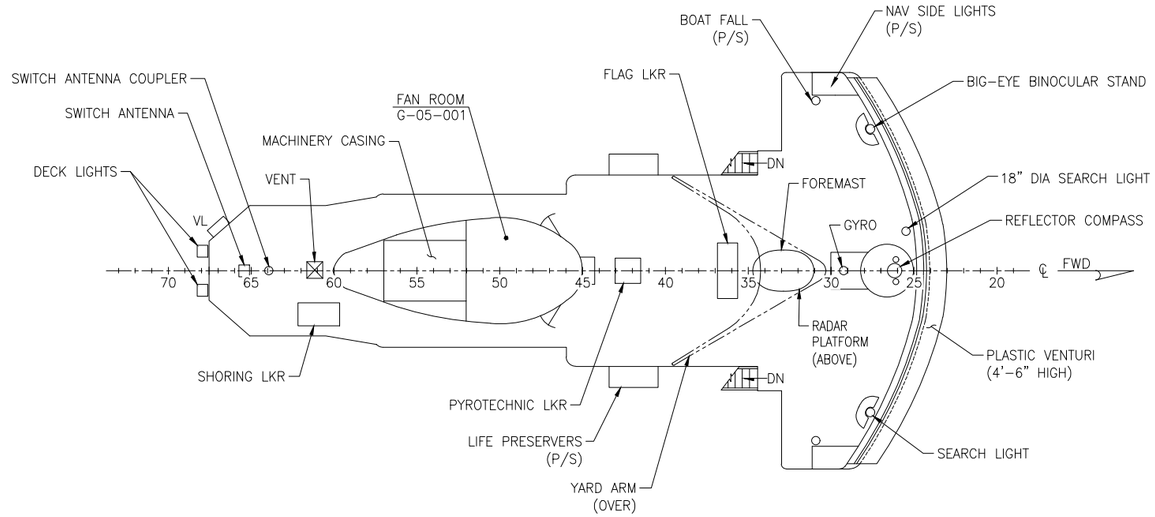
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg SHT 10 OF 11	



"G" DECK

SCALE: 1/8"=1'-0"

0 2' 4' 6' 8' 12' 16' 24'

SCALE: 1/8" = 1'-0"

SIZE	CAGE CODE	NOAA DRAWING NUMBER	REV
D	0YLJ5	S0900-2-2	B
SCALE: AS SHOWN		CAD FILENAME S0900-2-2_B.dwg	SHT 11 OF 11